

Energy Choice Matters

January 21, 2010

Brattle: MISO Should Assign PLC to Customers to Track Capacity Responsibility due to Migration

The Brattle Group recommended that the Midwest ISO pursue changes in its Module E Resource Adequacy construct to better accommodate the migration of load to and from competitive retail suppliers, in an evaluation of the market design. More broadly, Brattle recommended that MISO postpone consideration of transitioning to either a forward capacity market or an energy-only market, as neither design would provide immediate benefits.

Under MISO's current market design, load migration is accounted for by requiring an LSE perform its monthly peak forecasts based on its best estimate of how much load it will gain or lose over the month. If an LSE has under-forecasted its peak load but demonstrates to MISO that this is due to gaining new retail choice customers, MISO will not report the LSE to the state regulator for under-forecasting.

"This arrangement provides an incentive for the LSE losing retail customers to accurately predict those losses, and for winners to inaccurately predict no customer gains," Brattle noted, which could temporarily result in an aggregate system deficiency in which no LSE is held responsible for covering migrated load.

Another challenge for competitive retailers is that if migration levels do become high, it is not clear whether the Voluntary Capacity Auction (VCA) will have sufficient volumes to support last-minute purchases, Brattle added. Furthermore, MISO provides no true-up mechanism to account for mid-month migration, creating an equity problem if, for example, one LSE designates sufficient Planning Resource Credits (PRCs) but then loses customers at the beginning of the month, Brattle added.

Brattle recommended that in the absence of state standards to perform true-up functions and migration tracking, MISO should adopt a PJM-like system where each customer has a coincident peak load contribution (PLC), and each customer is assigned to an LSE. Under that mechanism, PJM assigns the peak load obligation of each Electric Distribution Company or Provider of Last Resort (POLR). The EDC is responsible for allocating a portion of that peak load to each of its customers by a method negotiated with its retail regulator. Then, if any end-user is currently served by an alternative retail provider or later migrates to one, the PLC of that customer must be acquired by the alternative supplier. Allocation of PLCs to customers would be simplest if done on an annual basis, possibly as a percentage which could scale to the peak load of each month, Brattle noted.

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PPL Residential Migration Hits 200,000

Residential migration at PPL has reached 205,961 accounts, or about 17%, as of January 16. Total migration across all classes is 247,673, also about 17%.

PUCO OKs Time-Based Rates at FirstEnergy Utilities

The Public Utilities Commission of Ohio approved the FirstEnergy utilities' application to offer three experimental, time-based generation rates through May 31, 2011 for non-residential customers, but ordered further investigation of

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Connecticut Light & Power Reports December Migration Data

Supplier Accounts as of 12/31/09	Dec. '09 Residential	Dec. '09 Business	Dec. '09 Total	% of Migrated Customers	Change vs. Nov. '09 Total
Clearview Electric	6,925	776	7,701	3.6%	1,070
ConEdison Solutions	4,820	2,351	7,171	3.4%	683
Constellation NewEnergy, Inc.	1,028	9,221	10,249	4.9%	421
Direct Energy Business LLC	110	1,664	1,774	0.8%	38
Direct Energy Services LLC	49,714	8,651	58,365	27.6%	8,586
Discount Power Inc	0	0	0		0
Dominion Retail Inc	54,139	11,074	65,213	30.9%	305
Energy Plus Holdings LLC	4,697	416	5,113	2.4%	1,244
Gexa Energy Connecticut, LLC	186	1,369	1,555	0.7%	276
Glacial Energy of New England	1,639	2,271	3,910	1.9%	252
Hess Corporation	521	1,884	2,405	1.1%	13
Horizon Power and Light LLC	0	0	0		0
Integrus Energy Services	34	3,468	3,502	1.7%	325
Liberty Power Holdings LLC	337	174	511	0.2%	64
MXenergy Electric Inc	3,567	1,691	5,258	2.5%	396
North American Power and Gas	0	0	0		0
Palmco Power CT LLC	0	0	0		0
Pepco Energy Services	0	9	9	0.0%	0
Public Power & Utility, Inc	22,627	4,288	26,915	12.7%	1,517
Rescom Energy, LLC	0	0	0		0
Royal Bank of Scotland	0	0	0		0
Sempra Energy Solutions LLC	3	1,013	1,016	0.5%	28
South Jersey Energy Company	0	3	3	0.0%	2
Suez Energy Resources NA	12	756	768	0.4%	33
Transcanada Power Marketing	26	2,712	2,738	1.3%	343
Verde Energy Savings	68	21	89	0.0%	89
Viridian Energy, Inc	6,351	493	6,844	3.2%	3,190
Whole Foods Market Group Inc	0	2	2	0.0%	0
Total All Suppliers	156,804	54,307	211,111	100.0%	18,875

Aggregate Data

Customer Load - Suppliers and CL&P (MWh)

	Residential - SS		Business - SS		Business - LRS		Total CL&P Territory	
	MWh	% of Class	MWh	% of Class	MWh	% of Class	MWh	% of Total
Suppliers	144,500	16.8%	387,288	68.5%	384,200	89.5%	915,988	49.4%
CL&P	716,475	83.2%	178,198	31.5%	45,076	10.5%	939,748	50.6%
Total	860,974		565,485		429,276		1,855,735	

Customer Count - Suppliers and CL&P

	Residential - SS		Business - SS		Business - LRS		Total CL&P Territory	
	Customers	% of Class	Customers	% of Class	Customers	% of Class	Customers	% of Total
Suppliers	156,804	14.2%	53,463	42%	844	82.7%	211,111	17.2%
CL&P	944,374	85.8%	72,705	58%	176	17.3%	1,017,255	82.8%
Total	1,101,178		126,168		1,020		1,228,366	

SS = Standard Service; LRS = Last Resort Service

DOE Wind Integration Report Notes Cost Challenges from Regulation Needs

An Eastern Wind Integration and Transmission Study published by DOE's National Renewable Energy Laboratory, which found that 20% wind integration is technically feasible under various assumptions, noted unclear impacts on regulation costs from such integration.

While added reserve costs resulting from carrying additional reserves to support wind can be extracted from production simulations to reflect the less efficient dispatch and opportunity costs, some additional operational costs associated with regulation duty are not captured in the study. "In current markets, regulation is a relatively expensive service compared to the provision of spinning operating reserve," the study notes.

If the generation mix does not change except for the introduction of wind, heavy penetration of wind generation frees up non-wind generation to supply the required regulating reserves that support frequency and balance generation with demand. However, moving up the supply curve for these services might reach into units that are much less efficient, further increasing the cost. In addition, questions arise about the depth of the resource "stack" for flexibility, which could potentially be another limitation, NREL noted.

"The decreased revenues of the fleet of intermediate generation and market structures, however, could affect the availability of these services in the market," NREL added.

"[I]f large amounts of wind energy displace conventional units and significantly reduce capacity factors, additional questions are raised about compensation in lieu of energy sales for those units and keeping them economically feasible to ensure the flexibility that the system requires," NREL noted.

NREL suggested further investigation of commitment and optimization of generation in cases of high amounts of wind. "In the future, new operating practices and energy market structures might be implemented that take advantage of the fact that uncertainty declines as the forecast horizon is shortened (for both load and wind generation). Intraday energy markets that allow more frequent reoptimization

of the supply resources could offer some advantage for accommodating large amounts of variable and uncertain wind energy," NREL said.

Briefly:

Perimeter Power Seeks Md. Broker License

Perimeter Power LLC applied for a Maryland electric broker license to serve all classes of customers in all service territories. Perimeter Power will not directly solicit customers, but rather will provide brokering services to customers of energy auditor ProEnergy Consultants, under an agreement with the auditor. Perimeter Power brokers in Texas, New Jersey, and New York.

Champion Energy Services Seeks Expanded Marketing Authority in Ohio

Champion Energy Services updated its Ohio electric supplier license to include authority to market to commercial, mercantile and industrial customers in all service areas. Under its original license, Champion had only sought to market to customers at the FirstEnergy utilities.

10K Energy Files to Add Mission Power as Trade Name

10K Energy applied for an amendment to its Texas REP certificate to add the trade name Mission Power.

PUCO Approves Allowing Migrated Customers to Participate in Rider PLM at Duke Energy

The Public Utilities Commission of Ohio approved Duke Energy's tariff revisions to allow customers on competitive supply to participate in the emergency program under Rider Peak Load Management (Rider PLM). Previously, only bundled service customers were permitted to participate in Rider PLM, which provides bill credits to customers reducing energy during Duke's peak load periods (Only in Matters, 9/9/09).

Integrays Says Specifics on Retail Unit's Future to be Discussed at February Analysts Meeting

Integrays Energy Group, which has opted to retain "selected" portions of the retail electric

and gas business of Integrys Energy Services (Only in Matters, 1/20/10), said yesterday that it would not expand on what the term selected portions meant beyond what has already been announced with regard to the retail unit, namely, the previously completed sale of its Canadian retail books. Otherwise, Integrys said that any potential changes in its retail strategy or focus would be addressed at a February 17 analysts meeting.

Christie to Name Lee Solomon as BPU President

Newly elected New Jersey Gov. Chris Christie is to announce today the nomination of State Superior Court Judge Lee Solomon as the president of the Board of Public Utilities. Solomon is a former deputy U.S. attorney for New Jersey.

Price Energy Solutions Withdraws Conn. Aggregation Application

Broker Price Energy Solutions withdrew its electric aggregator application at the Connecticut DPUC.

NYISO Identifies Generators Subject to Extra-Tariff Mitigation Application

The New York ISO identified the three generators upon whom it is seeking to impose extra-tariff mitigation as Sterling, Batavia, and Saranac. NYISO did not list ownership in its filing, and while ownership of the Sterling and Batavia units seems clear, there is colloquially more than one plant referred to as Saranac in NYISO, and NYISO gave no indication as to which plant it was, so we will await further clarification from NYISO or the generators' unredacted filings before attributing any ownership (ER09-1682, Matters, 9/7/09).

Luminant Credit NPRR Officially Filed

Luminant's Nodal Protocol Revision Request to revise credit requirements for the day-ahead market has been officially submitted as NPRR206 (Only in Matters, 1/19/10).

Calif. PUC Revises Cerritos Draft to Include Energy-Based Aggregation Cap

The California PUC has released an agenda decision (revised draft) that would grant the City

of Cerritos' exception to an original proposed decision regarding the load limit for Cerritos' opt-in, direct access aggregation, and would set the cap based on Cerritos' share in the energy output of the Magnolia Power Project, rather than its share of installed capacity (see Matters, 1/19/10).

ERCOT Reports Disclosure of Confidential Information

ERCOT reported that on December 29, 2009, its Energy Management and Market Systems (EMMS) team inadvertently disclosed loading Resource registration data publicly, in violation of the Protocols, due to human error. ERCOT reported that personnel were upgrading the Integrated Development Environment (iDev), which includes loading Resource registration data. The tool used to load this data to iDev also has the ability to load the data into the Nodal Production Environment (NPROD). As a result of human error, this tool was pointed to NPROD instead of the iDev, resulting in the Resource data touching other NPROD tables such as Qualified Scheduling Entities' Resource parameters. This error was discovered when a QSE contacted ERCOT to report that it could view another QSE's Resource parameters. ERCOT said that the environment was immediately blocked to the market, and system logs confirmed that only one Market Participant viewed another QSE's Resource parameters. ERCOT has been assured by the viewing QSE that the other QSE's Resource data has been deleted and permanently destroyed.

MISO ... from 1

Under a PLC system, Brattle said that the equity problem could be solved with the creation of a monthly after-the-fact true-up based on the number of days that customers were with each LSE. The under-designating LSE would be charged; the over-designating LSE would be credited. The true-up price could be the Voluntary Capacity Auction clearing price or could be determined by the state regulator. "State regulators may prefer to develop their own true-up price if they feel that the VCA price is too volatile or does not accurately represent underlying fundamentals due to the low

volumes," Brattle said.

Another problem which Brattle said must be addressed is MISO's reliance on LSEs to forecast their own non-coincident peak loads, which may create incentive problems and accounting gaps. "LSEs could be tempted to under-forecast their load when capacity becomes scarce and prices rise," Brattle said.

"Using non-coincident peak load accounting can also create incentive and equity problems by not recognizing the value of peak load diversity. An LSE whose coincident peak load is low, even if its non-coincident peak load is high, should not require as many capacity resources for reliability as an LSE with a high coincident peak load. Not recognizing this fact creates an equity problem in that LSEs that are highly non-coincident are required to pay for more than their share of required planning resources," Brattle added. The use of non-coincident peak loads and average diversity factors also does not give LSEs an incentive to improve their diversity factors by managing load away from the system coincident peak, Brattle said.

While MISO had justified placing the load forecasting requirements on LSEs because of the LSEs' experience forecasting their own load, Brattle noted that many LSEs report that they do not have sufficient experience to accurately forecast load at the CPNode level as is currently required, but rather have historically done their forecasting for the entire LSE. "For new or growing competitive retailers, the ability to do accurate load forecasting is further hindered because these retailers likely do not have sufficient historic data for all of their customers," Brattle added.

Brattle recommended that MISO develop a centralized, coincident-peak load forecasting system, though it said that MISO should continue to gather forecasting data and input from LSEs and local balancing authorities during a transition period.

Brattle criticized the lack of locational sourcing requirements in the resource adequacy requirements for transmission-constrained zones. Without such local requirements, locational resource adequacy may rely on out-of-market mechanisms, except to the extent that locational scarcity prices (for energy and ancillary services) are high enough to attract

and retain resources, Brattle noted.

MISO, Brattle recommended, should review its options for developing market-based approaches to local resource adequacy. Brattle cited three general options available for modifying the construct for locational resource adequacy:

1. Impose a local sourcing requirement (LSR) for any quantity of capacity that cannot be imported to a constrained zone.

2. Develop locational capacity prices by applying transmission constraints to the VCA, which could also translate back into the bilateral market. This option would be unlikely to work well, however, unless VCA volumes increased significantly or the option were combined with a bilateral mechanism for purchasing capacity import rights similar to the one in place in NYISO.

3. Transitioning to an energy-only construct by relying on scarcity pricing for resource adequacy in load pockets.

Regardless of the approach MISO takes for locational resource adequacy, Brattle recommended incorporating a locational scarcity pricing evaluation into the annual Loss Of Load Expectation study.

Brattle reported that the current "1 day in 10 years" Loss Of Load Expectation reliability criterion, which MISO uses as the basis for setting resource adequacy requirements, has not been sufficiently evaluated for economic efficiency by either MISO or the regional reliability entities.

Beyond incremental changes to the current Module E construct, Brattle recommended postponing consideration of transitioning to either a forward capacity market or an energy-only market. "The incremental benefits of a forward capacity market would not be available until several years from now when new capacity is needed. When available, these benefits would accrue primarily to retail choice states, and many traditionally regulated states are opposed to the idea," Brattle said.

Regarding the energy-only option, MISO should not dispense with the resource adequacy requirement as long as there is insufficient price responsive demand for the market to sort out various levels of non-firm load while maintaining satisfactory reliability for load that prefers more firmness, Brattle added.

Brattle recommended that, along with its suggested revisions to Module E, MISO should integrate more price-responsive demand in order to enhance economic efficiency while maintaining a satisfactory level of reliability. "This means that state regulators should pursue all cost-effective retail-level demand response, while MISO continues to enable wholesale market participation and further develop the price-setting ability of demand response ... Ultimately, increasing demand participation would enable MISO to rely more heavily on market-based energy and ancillary prices without eliminating the reliability standard for the portion of load that does not wish to be curtailed in response to high prices," MISO said.

Although, from the market results to date, Brattle cannot confirm that the current MISO construct will incent the next round of capital investments in retail choice states (because the design has not yet been tested by foreseen shortages), Brattle's expectation, however, "is that needed investments will be made, although possibly at a greater cost, and possibly not where needed."

"The lack of long-term contracting under retail choice places investment risks on suppliers, who will therefore require a higher return on investment. The shift of risk from consumers to suppliers, and the associated risk premium, are inherent in retail restructuring, and it is not MISO's job to undo these state policies. Even so, the RA construct includes an LSE penalty structure that is more than three times higher than the net cost of new resources (particularly if the LSE were to be short for an entire year), creating a large incentive to avoid being caught short and paying the required premium for resources not under long-term contract," Brattle said.

FirstEnergy ... from 1

the proposed residential time-based rates (Only in Matters, 6/30/09).

The approved non-residential rates include an Experimental Critical Peak Pricing Rider, an Experimental Real Time Pricing Rider, and a revised Generation Service Rider which includes a Time-of-Day Option.

The Experimental Real Time Pricing program

includes a monthly program administrative charge of \$150/month. The Experimental Critical Peak Pricing program, which features three prices (midday peak, shoulder peak, and off-peak) includes a monthly program charge of \$37.50. Normally the midday peak charges will be equal to the shoulder peak charge, except on up to 10 days determined by the utilities in which the price is raised by a factor of five to reflect to the critical peak

The optional time-based Generation Service Rider includes the same three time periods as under critical peak pricing, but with different rates and without the ability for the utilities to invoke a critical peak rate.

Rates can be found in Case 09-0541-EL-ATA.

For the proposed identical residential programs, PUCO directed Staff to investigate the cost of the meters and proposed rate designs, and to file a recommendation after its investigation.